Garlic Mustard – It's Time to Pull!

Garlic mustard was first introduced by colonial settlers for culinary and medicinal purposes and in 1868, it was found growing in woodland communities in Long Island. Since that time it has spread to 34 states and is considered one of the most invasive plants in our region. Removing garlic mustard before it establishes is essential to maintaining healthy native plants and wildlife in our woodlands, parks, and back yards.

Not all non-native plants are harmful. About one third of the vascular plants in Massachusetts are non-native, but only about 7 percent of these plants are considered invasive. Invasive plants often have no natural predators in their new environment, allowing their populations to grow without the usual checks and balances. They also tend to produce large numbers of seeds that are dispersed by wind or birds. In addition, some studies have shown that the fruits produced by non-natives offer lower nutritional value to wildlife – the junk food of the natural world. In an effort to stem the flow of invasive plants, Massachusetts issued a prohibition in 2009 on buying, selling, trading, and distributing invasive plants through the Prohibited Plants List (mass.gov/eea/agencies/agr/farm-products/plants/massachusetts-prohibited-plant-list.html).

Garlic mustard is a plant in the mustard family with a two-year life cycle. Garlic mustard grows in upland and floodplain woodlands in similar habitats of other, more desirable species like Solomon's-seal, trillium, trout lily, bloodroot, sweet-cicely, wild ginger, and others. It outcompetes native wildflowers and tree seedlings by growing more aggressively year-round and by releasing root compounds that interfere with soil fungi important to native plants, making the soil more suitable for garlic mustard and less so for everything else. Few insects or deer will eat the plant. Garlic mustard is also found in yards, neighborhood parks, and along roads. It thrives in shady conditions but can also tolerate sun.

First-year plants form a rosette of leaves close to the ground. Leaves are heart shaped with scalloped edges, deep green, and somewhat wrinkled in appearance. Crushed leaves smell like garlic, especially in spring.

In second-year plants, a flower stalk rises from the rosette in mid to late April, and can be 1 to 3 feet tall. Clusters of small, 4-petaled flowers appear on the stalk, which can blossom from late April through June. Each flower develops
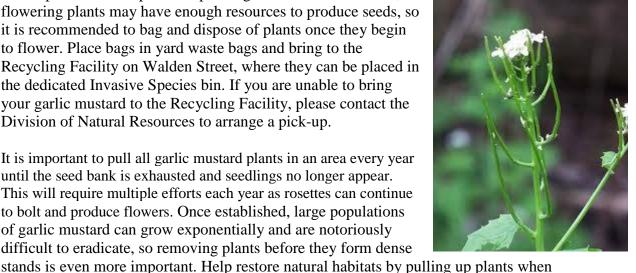
a slender seedpod about 1 to 2 inches long. Pods are green at first, but turn tan as seeds ripen.

Fortunately, garlic mustard is one of the easier invasive plants to physically eradicate, though to be successful, efforts must occur over several years as each plant can produce up to 3,000 seeds that can remain viable in the soil for 5-12 years. Hand-pulling second-year plants is an effective means of control for small populations, and is best done before and while plants are flowering, before seed production. Gently tug from the base of the plant to remove the entire root as well as the stem – roots can resprout if left in place. Depending on weather conditions, flowering plants may have enough resources to produce seeds, so it is recommended to bag and dispose of plants once they begin to flower. Place bags in yard waste bags and bring to the Recycling Facility on Walden Street, where they can be placed in the dedicated Invasive Species bin. If you are unable to bring your garlic mustard to the Recycling Facility, please contact the Division of Natural Resources to arrange a pick-up.

It is important to pull all garlic mustard plants in an area every year until the seed bank is exhausted and seedlings no longer appear. This will require multiple efforts each year as rosettes can continue to bolt and produce flowers. Once established, large populations of garlic mustard can grow exponentially and are notoriously difficult to eradicate, so removing plants before they form dense stands is even more important. Help restore natural habitats by pulling up plants when you see them!

Please contact the Division of Natural Resources at 978.318.3285 for more information.